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Vibhu Mittal

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EXAMINER

CHEN, TE Y

ART UNIT

PAPER NUMBER

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NOTIFICATION DATE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/676,724	<b>Applicant(s)</b> MITTAL ET AL.	
	<b>Examiner</b> SUSAN Y. CHEN	<b>Art Unit</b> 2161	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-21 and 46-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-21 and 46-61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/23/2009</u> .  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Amendment***

This office action is in response to the amendment filed on Nov. 23, 2009.

Claims 14-21 and 46-61, are pending for examination; claims 14, 46 and 54 have been amended; claims 1-13 and 22-45 have been canceled.

***Drawings***

The drawings were received on Sept. 30, 2003. These drawings have been noted by the Office, accepted and stored on record.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-21 and 46-61, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,724,593 issued to Hargrave et al. (hereinafter referred as Hargrave).

Claim 14:

Hargrave discloses the claimed search method comprising:

obtaining a search query including one or more terms, each term written in a first format from a user [e.g., col. 5, lines 10 – 22, the source to target language formatting in Fig. 6, col. 9, lines 66—67, col. 13, lines 24 – 30, the translation memory (TM) obtains a user search query entered at the step 903, Fig. 9 in a source language format];

translating the one or more terms of the query into a group of translated queries, each translated query having one or more terms in a second format using a probabilistic dictionary, the probabilistic dictionary mapping terms from the first format to the second format [e.g., the use of a stored particular language query term relevant n-gram dictionary listing with probabilistic weight calculated by steps as shown by Fig 1 and associated texts, the use of computer software to perform probabilistic dictionary language translation at col. 5, lines 22 – col. 8, lines 60, the software of Translation Memory (TM) system of Fig. 9 which encodes, converts and decodes the source query language in query input segment format into a translated query vector format (e.g., the steps 905-907, Fig. 9) or sorted target text segments format at the steps: 901-917 of Fig. 9 and associated texts];

using the group of translated search query to search a database for information identifying documents responsive to one or more translated queries of the group of translated queries [e.g., the use of inverted index in a post vector file (e.g., the unit: 405, Fig. 4), a correlation file (e.g., the unit: 407, Fig. 4) and a aligned pair file (e.g., the unit: 403, Fig. 4) to search a database (e.g., the TM at col. 2, lines 39-31 & col. 11, lines 37 – col. 12, lines 25 & Fig. 3 and associated texts) for information identifying documents by

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a information retriever (e.g., col. 13, lines 8 – 10, Fig. 9 and associated texts), wherein the retriever processing use the TM database to quickly search (or find) all text segments in the aligned pair file similar to the text of one or more translated queries (col. 13, lines 8 – 10) of the group of translated group (e.g., the grouped and sorted normalized vector array available in the post file at col. 13, lines 20 - 67)]

in responsive to one or more translated queries of the group of translated queries (e.g.,

the use of a “aligned pair file” which was created in Fig. 2 and loaded into the Translation Memory for a retriever to retrieving information identifying documents (e.g., col. 13, lines 8 – 10, Fig. 9 and associated texts) in responsive to one or more translated queries of the group of translated queries (Fig. 4 and associated texts)];

retrieving identifying documents responsive to one or more translated queries (e.g., )

at Col. 5, lines 10 – 22, and the use of vector based retrieval to perform a database

fast sparse vector calculations such as creating of a load table and Fast-Inv algorithm (col. 11, lines 20 – 34) to apply the post vector file (405, Fig(s). 4 & 6), and correlation file (407, Fig(s). 4 & 7) to search, index and retrieve a database (e.g., col. 2, lines 39 – 41) by using the copied aligned file (e.g., 215, Fig. 1) in group of translated search query copied into an aligned pair file similar to the text of a query segment (e.g., col. 13, lines 8-10) & col. 11, lines 20 – col. 14, lines 16]; and

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returning search results written in the second format to the user, the search results referencing one or more documents responsive to the one or more translated queries [e.g., the use of correlation and linking back techniques at col. 12, lines 50 - 55, col. 14, lines 20 – 24, Fig. 9 and associated texts].

Claim 15:

Except the limitations recited in claim 14, Hargrave further discloses:

obtaining search result selections from the user [e.g., the steps: 903-907, Fig. 9 and associated texts];

using said search result selections to modify the probabilistic dictionary of term mappings [e.g., col. 13, lines 20 – 57, the steps: 903-913, Fig. 9 and associated texts].

Claim 16:

Except the limitations recited in claim 15, Hargrave further discloses the modification comprises adjusting at least one probability associated with at least one mapping in the probabilistic dictionary [e.g., col. 5, lines 1-9, Fig. 9 and associated texts].

Claim 17:

Except the limitations recited in claim 14, Hargrave further discloses where translating the query into the second format includes expanding the query [e.g., the

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adding and linking back schema at col. 12, lines 26- col. 13, lines 6, col. 13, lines 41 – col. 14, lines 8].

Claim 18:

Except the limitations recited in claim 17, Hargrave further discloses the expanded query includes alternative encodings of the query terms [e.g., col. 14, lines 1-16].

Claim 19:

Except the limitations recited in claim 17, Hargrave further discloses the expanded query includes alternative language translations of the query terms [e.g., col. 14, lines 16-17].

Claim 20:

Except the limitations recited in claim 17, Hargrave further discloses the expanded query includes alternative encodings and alternative language translations of the query terms [e.g., col. 14, lines 1-17].

Claim 21:

Except the limitations recited in claim 18, Hargrave further disclose the expanded query includes synonyms of the alternative encodings of the query terms [e.g., col. 2, lines 38-67, col. 14, lines 1-17].

As to claims 46 – 61, these claims recite similar features as claims 14 – 21 in form of computer system and storage medium encoded with a computer program, hence are rejected for the same reason.

### ***Response to Arguments***

Applicant's arguments filed on June 25, 2009 have been fully considered but they are not persuasive.

The examiner disagrees with applicant's arguments that:

the prior art of Hargrave does not refer to “using to using the translated result and particular do not disclose or suggest using the groups of translated queries to search a database for documents responsive to the translated queries”;

In respond to above arguments, the examiner directs applicant attention to the following excerpts and Figures disclosed by Hargrave:

As acknowledged by applicant, the Translation Memory (TM) system disclosed by Hargrave includes a database that “collects translations as they are performed along with the source language equivalents.” (col. 2, lines 39 - 41). Further, Hargrave clearly disclosed that “In accordance with the present invention, the heart of the TM is an “aligned file” comprising a source language file that is broken into a plurality of text segments. Each text segment may be a word, group of words, phrase, sentence,. or the like. Each source language text segment is associated or aligned with a translated



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text segment in a target language. Many of the operations described below are performed only on the text strings in the source language file. However, it should be remembered throughout the discussion that each source language text segment is associated with a translated text segment in the aligned file thereby allowing searches of the source language text segments to produce translated text segments also." (col. 5, lines 10 -22)

As set forth above, Hargrave clearly disclosed searching the "TM" database by using an "aligned file" that associates "each source language text segment" with a "translated text segment" for searching.

In addition, Hargrave clearly disclosed the use of inverted index in a post vector file (e.g., the unit: 405, Fig. 4 and associated texts), a correlation file (e.g., the unit: 407, Fig. 4 and associated texts) and a aligned pair file (e.g., the unit: 403, Fig. 4 and associated texts) to search a database (e.g., the TM database at col. 2, lines 39-31) for information identifying documents by a information retriever (e.g., col. 13, lines 8 – 10, Fig. 9 and associated texts), wherein the retriever processing use the TM database to quickly search (or find) all text segments in the aligned pair file similar to the text of one or more translated queries (col. 13, lines 8 – 10) of the group of translated group (e.g., the grouped and sorted normalized vector array available in the post file using an accumulated score at col. 13, lines 20 – 67.

Thereby, in contrary to applicant's arguments, Hargrave fully anticipated the claimed features.

Based on the discussion above, because applicant does not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or rejections, therefore, it is believed that the rejections on record should be sustained.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Troyanova et al. (U.S. Patent No. 7,120,574), which disclosed computer search involves expanding a user query with two synonym dictionaries--actions and object--and then validating the expanded queries by comparison with entries in a Subject-Action-Object Knowledge Database (SAO KB) in a discipline corresponding to the query.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Points of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN Y. CHEN whose telephone number is (571)272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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February 26, 2010

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